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ABSTRACT

This report presents a brief summary of the full report of an evaluation of California schools receiving funds from three state and federal school funding programs in 1974-75. The evaluation was conducted by the California State Department of Education. Evaluated schools were funded through: (1) the Early Childhood Education (ECE) program, which provides state funds to schools with students in kindergarten through third grade to increase competency in reading, language, and mathematics; (2) the Elementary and Secondary Education Act (ESEA) Title I, which provides federal assistance for schools with students from low families; and/or (3) the Educationally Disadvantaged Youth (EDY) program, which provides state funds for schools with students whose educational disadvantage results from low family income, language barriers, and transiency. Sources of evaluation data included ratings of school plans, school self-reports, school visitations, and student achievement data. Results of evaluation showed that schools participating in the three funding programs evidenced positive change. (BRT)

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Summary of the Evaluation Report of ECE, ESEA Title I, and EDY 1974-75

CALIFORNIA STATE DEPARTMENT OF EDUCATION • Wilson Riles—Superintendent of Public Instruction • Sacramento, 1976

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Introduction to the Report

The *Evaluation Report of ECE, ESEA Title I, and EDY, 1974-75*, summarized in this document, is a comprehensive report of the effects of local school programs, kindergarten through twelfth grade, receiving state and federal monies through the consolidated application process. The consolidated application, designed pursuant to the provisions of Assembly Concurrent Resolution 127 (1969), provides a vehicle to bring together in a united planning effort the various state and federal supplementary funding sources, which were previously fragmented and often administered separately.

This summary of the evaluation report provides an overview of the total impact of the state funded early childhood education (ECE) reform effort, the educationally disadvantaged youth (EDY) program, and the federally funded Elementary and Secondary Education Act (ESEA) Title I program. These three largest of California's supplementary education efforts, which served 806,752 students in 1974-75, frequently overlap within a given school. Because of this substantial degree of overlap, it has become clear that one consolidated evaluation report covering these three efforts is appropriate. The evaluation report itself and a separate appendix provide complete data concerning ECE, ESEA Title I, and EDY for 1974-75. Both the report and the appendix are available upon request to the Department of Education. The appendix, which was produced as a separate document, is an exhaustive compilation of the original data.

This summary of the evaluation report has been arranged in much the same manner as the full report itself: (1) the program description for ECE, ESEA Title I, and EDY; (2) the procedures, instrumentation, and limitations of the study; and (3) the findings of the evaluation. However, to assist the reader in gaining an immediate picture of the evaluation, the Department has prepared a summary of the findings and implications and has made that summary the first section of this document.

Summary of Findings and Their Implications

The findings presented in this section of the report were based on a review and analysis of the data gathered by the State Department of Education regarding those schools participating in the early childhood education (ECE) reform effort and those with ESEA Title I and educationally disadvantaged youth (EDY) programs in 1974-75. The evaluation findings are arranged according to this order: institutional change; student achievement; participants in ECE, ESEA Title I, and EDY; expenditure patterns, and the evaluation process.

Institutional Change

Evidence of institutional change in schools within the ECE reform effort was gathered from the quality ratings of the school level plans, quality reviews conducted during the monitor and review (MAR) school visitations, and the product evaluation reports prepared by schools in which they described and evaluated their programs at the end of the year. The changes in the schools (institutional change) were evident from these 1974-75 findings:

- The plan rating information showed that all the schools were doing systematic planning, with more than 75 percent conducting quality needs assessments.
- The plan rating information showed that 80 percent of the schools were able to write quality goals, and 70 percent were able to develop quality objectives.
- The product evaluation report information showed a 54 percent increase in number of participants in parent participation component activities and a 55 percent increase in the number of participants in parent education component activities over the 1973-74 data, with a 30 percent increase in participating schools.
- The monitor and review (MAR) data showed that of the 913 ECE schools visited, more than 87 percent had individualized, diagnostic instructional programs operating at or above the satisfactory level in all phases of reading and mathematics.
- The MAR data showed that more than 85 percent of the schools had staff development programs which systematically were meeting the assessed needs of teachers, paid aides, and administrators at or above the satisfactory level.
- The self-report data in the product evaluation report and in-depth study information indicated that local evaluation was occurring.

The clear implication from these findings was that ECE schools were making major changes throughout many areas of their programs, indicating in turn basic changes in the institutions.

Three areas of institutional change, although rated well, were sufficiently below a level of quality to warrant further examination:

1. More than 25 percent of the 913 ECE schools visited had some language development areas related to individualized instruction which were below the satisfactory level. Additional data indicated a lack of clarity existed regarding the meaning of language development, and the data also indicated that instructional materials and measurement tools were lacking.
2. Twenty-three percent of the 913 ECE schools visited were rated below the satisfactory level in parent participation in program evaluation. This indicated a need for more effort to involve parents in this specific activity.
3. The inservice programs in 27 percent of the ECE schools visited were rated below the satisfactory level in meeting the assessed needs of volunteers. This finding indicated a need for increased attention to this area, particulary since the number of volunteers in schools has increased so greatly.

Student Achievement

In student reading and mathematics achievement, the results of programs developed with all funding combinations equaled or exceeded last year's achievement, which was an average gain of 11 months growth for 10 months in school. In addition, the pre-post standardized testing showed that:

- ECE only schools attained reading achievement above the national average on post-test scores in all grades served.
- The schools in the ECE reform effort tended to have higher scores in all achievement

areas than schools not included in the effort (ESEA Title I and/or EDY only).
- Schools with ESEA Title I and EDY funded programs maintained month-to-month growth, when historically such schools would only be expected to gain seven months in ten months of instruction.
- Schools entering ECE for the first time in 1974-75 had significantly greater achievement, statistically, than the original schools in 1973-74 in all areas except second grade mathematics.

In addition the California state assessment testing showed that students in the ECE process achieved significantly higher, statistically, than did matched groups of students not in the program.

Participants in ECE, ESEA Title I, and EDY

A total of 806,752 students were served through the combined funding sources in 1974-75. Sixty-five percent of the students were enrolled in kindergarten through grade three (ECE, ESEA Title I, and EDY); 23 percent, in grades four through six (ESEA Title I and EDY); and 12 percent, in grades seven through twelve (ESEA Title I and EDY). More students received services in reading than in any other instructional component. A duplicated count showed that 770,000 participating students were included in reading instruction, 580,000 in language development, and 717,000 in mathematics. Large numbers of volunteers were working in the programs: 67,000 adults contributed 200,000 hours per week, and 61,000 students contributed 156,000 hours per week.

Expenditure Patterns

Examination of the final fiscal reports from a limited sample of districts showed differences in the patterns of expenditures within ECE, ESEA Title I, and EDY. In ECE, 55 percent of the funds went to pay classified salaries, and 21 percent of the funds were used for certificated salaries. In ESEA Title I programs, 43 percent of the funds were used for classified salaries and 33 percent for certificated salaries. In EDY programs, 10 percent of the funds went to pay classified salaries, while 71 percent of the funds were used for certificated salaries. The need for an analysis of all the expenditure data was implied by this finding, and this analysis is currently being made.

Evaluation Process

As indicated in the section of the evaluation report entitled "Procedures, Instrumentation, and Limitations," a variety of problems were identified in the evaluation instrumentation. The Department has already made the following changes for 1975-76:

1. The plan rating instrument has been redesigned to correspond more closely to the planning process. In addition calculations of inter-rater reliability are being made on the plan raters.
2. In light of the concerns raised in 1974-75, the monitor and review (MAR) instrument has been redesigned to make it more functional and to allow separate measurements of implementation according to the school's plan, progress toward restructuring or revitalization, and quality of the program. Measurements of inter-rater reliability and additional inservice training in the instrument's use are being pursued.
3. The instrument used to assess program compliance has been reduced to a more manageable size, and it focuses on statutory requirements.
4. The progress implementation report has been eliminated, since it was a requirement which seemed to report data of little usefulness.
5. The product evaluation report has been reduced in size and will specify enumeration data, data from standardized test results, and data on the schools accomplishment of objectives. All standardized test results are to be reported in mean raw scores.
6. In-depth studies, with less dependence on self-report data, will be done only for selected components and processes, emphasizing the processes of institutional change.
7. Plans are being made to provide longitudinal data in the continuing evaluation process.

There was difficulty in measuring the gains made by limited-English speaking students and non-English speaking students due to the lack of appropriate instrumentation. The Department of Education is currently engaged in developing such instrumentation, but it is not scheduled to be completed until 1977. The same problem of pre-post gain measurement will therefore exist in the 1975-76 report.

Because the consolidated evaluation format provided comprehensive program information instead of isolated information for each funding source, the continued use of this format is indicated for the 1975-76 consolidated evaluation report. This approach, with the previously specified modifications, should provide even fuller data for 1975-76.

Program Description

This section of the summary gives the reader a background against which to measure the effects of the three funding sources. It provides an overview of the enabling legislation for ECE, ESEA Title I, and EDY, followed by participant, funding, and eligibility requirements. The assumptions for these programs are presented, followed by an outline of the policy requirements. These requirements deal with institutional change and student achievement.

Enabling Legislation

When the early childhood education (ECE) reform effort was enacted in Chapter 1402, Statutes of 1972, the California Legislature provided for a restructured primary education designed to assure that all students in kindergarten through third grade would receive instruction that would meet their unique needs, talents, interests, and abilities. The Legislature called for the cooperation and extensive participation of parents and the community in the education of children in these early grades. The Legislature also asked that maximum use be made of existing state and federal funds in a coordinated effort to help primary school students increase their competencies in reading, language, and mathematics skills and thus help ensure their achievement in later grades.

The state funded program for educationally disadvantaged youth (EDY) was designed to provide quality educational opportunities for students whose educational disadvantage had resulted from low family income, language barriers, and transiency. The EDY program was authorized in Chapter 1406 of the Statutes of 1972 (SB 90).

Similarly, by enacting Title I of the Elementary and Secondary Education Act (ESEA) in 1965 (P.L. 89-10 as amended), the United States Congress provided financial assistance for the augmentation of educational programs for students from low-income families. The California State Department of Education allocates and monitors basic grants of money to local educational agencies qualifying for the ESEA Title I funds.

In developing a program, a local school may use one or a combination of federal or state monies for which it qualifies, as long as it can provide a proper accounting of the funds from each source. In addition to the three main sources cited, the following were also sources of funds for the 1974-75 programs: Miller-Unruh Basic Reading Act; Bilingual Education Act of 1972; ESEA Title II, Phase I; and American Indian Early Childhood Education Act.

Participants, Funding, and Eligibility

The 1974-75 state budget provided $40 million for the support of ECE, which involved about a fourth of California's student population in kindergarten through grade three. On approval by the State Board of Education of a school's proposed program, ECE money was granted for a school on the basis of $130 per student in kindergarten through third grade, with an extra $65 each for up to 25 percent of the kindergarten through third grade students who were in the lowest quarter in achievement.

In each year, half the ECE funds for any one participating district must go to those individual schools in the district which have the greatest educational need. Because ECE serves all children, kindergarten through grade three in a school, ECE outcomes can be expected to be higher than those for ESEA Title I and EDY programs, which serve only specially identified participants in each school. In ECE schools these special populations continue to receive Title I and/or EDY monies.

The ECE legislation requires that each participating ECE school be evaluated and given a composite score based on a quantitative estimate of the degree and success of program implementation, pupil progress, and fiscal expenditures. Table 1 shows the factors examined and their weights in each successive year of program implementation.

California ESEA Title I funds in 1974-75 totalled $155 million. These funds were allocated according to formulas based on census information and Aid to Families with Dependent Children (AFDC) data.

Once ESEA Title I funds are allocated to a school, students to receive the services are selected on the basis of their educational need. All students scoring at or below the second quartile on standardized achievement tests or those who have serious learning deficiencies because of linguistic, social, and cultural differences or economic isolation are eligible. In their use of ESEA Title I funds,

Table 1

Factors Rated in ECE Schools, with Weights Assigned Each Factor

Factor rated	Weight given to factor rated, expressed as a percent, by year of participation		
	First year	Second year	Third year
Degree and success of program implementation	70	50	50
Quantitative estimate of pupil progress	10	40	50
Fiscal expenditure	20	10	0

districts must provide extra services to ESEA Title I participants over and above what they provide to nonparticipating students. Other special categories of students that are eligible to receive services under ESEA Title I included handicapped students living in state institutions, American Indian and migrant students, and students in state institutions for the neglected or delinquent.

Educationally disadvantaged youth (EDY) funds are allocated to school districts pursuant to a formula which includes indices of bilingualism, transiency, and poverty. The California Legislature in 1972 provided $82 million for each of three years of implementation. Approximately $4.6 million allocated to school districts was used for the implementation of EDY only programs, and the remaining $77.4 million was used in schools receiving other state or federal funds.

Once their eligibility for EDY funding was established, districts selected those school attendance areas which had students with the greatest educational need. Need was determined principally by either the number or percent of students scoring below the twenty-fifth percentile on standardized achievement tests in reading or mathematics.

Assumptions of ECE, ESEA Title I, and EDY

The intent of ECE, ESEA Title I, and EDY has been to provide for increased student achievement, particularly in the areas of reading, language development, and mathematics. While ESEA Title I and EDY have addressed selected students who have had learning disadvantages, ECE has served all kindergarten through third grade students within a school. The ECE reform effort has gone beyond just changing the instructional program for selected students; it creates changes in the institution which provide a better learning environment for all students. Such institutional change results from a systematic reform of the ways in which the schools plan their programs, provide services to students, involve parents, utilize community resources, and evaluate outcomes for purposes of replanning.

It is important to note the assumptions about how to effect institutional change which underlie the ECE reform movement. Such assumptions are the basis of the requirements made of schools and districts participating in ECE.

A major assumption of the ECE reform movement is that the more clearly a school can describe what it intends to do for students and why, the greater the probability that such planned activities will take place in a timely fashion and the greater the likelihood that anticipated results will be achieved. Conversely, the greater the degree of ambiguity of the school's intent, the lesser the degree of timely implementation of planned activities and of achieving anticipated results. This type of program description is embodied in a program plan to be developed at each school by those individuals—teaching staff and parents—actively involved in the reform effort.

A second assumption is that program planning as well as efforts to implement and evaluate the planned program is enhanced by a school based advisory committee which broadens the base of decision making at the school. Such a school advisory committee is to be representative of parents, community, teaching staff, support personnel, and administrators to ensure full consideration of the various viewpoints of the school community, alternative strategies for resolving problems, and full use of all available resources.

A third assumption is that students learn best in an individualized program in which there are methods of identifying and providing for their individual needs and interests. The adult to student ratio must be low to assess adequately and to meet such needs and interests.

A fourth assumption is that the involvement of parents is vital: (1) parents are an important source of talent for implementing the program; and (2) parents' knowledge of their child's classroom experience enables them to reinforce at home that which the child is learning at school.

Requirements Relating to Institutional Change

Districts using a broadly representative district advisory committee with responsibility to the local governing board were responsible for developing a district master plan for ECE; conducting a district-wide needs assessment on a school-by-school basis; establishing district program goals and objectives;

and planning for an orderly phasing-in of the district's schools into ECE.

Schools, with full participation of the representative school advisory committees, were required to follow the requirements for the school-level planning process outlined by the state. The plans developed through the planning process were to include a needs assessment, school goals and measurable performance objectives, appropriate solution procedures or activities to close the gap between what was and what was desired, a plan for both process and product evaluation and feedback, a timeline of scheduled events, and a budget which showed the coordination of all resources in the school. The plan was to consist of program components in reading, language development, mathematics, multicultural education, services for limited and non-English speaking students, staff development, parent participation, parent education, health and auxiliary services, and any other area which the school believed was appropriate to its own situation.

In the 1974-75 school year, each elementary school receiving ECE, ESEA Title I, or EDY funds was required to develop a plan for the use of those monies. These plans were to cover all funding sources in the school. Submission of school level plans to the Department of Education was required only of ECE schools. Schools funded only by ESEA Title I or EDY were not required to submit their plans to the Department but were to maintain them on file within the school, where a stratified random sample was reviewed.

The Department defined the broad outlines of successful program areas in which the needs of students were to be assessed. The ECE plans were to address, and the programs were to implement, the following: individualized, diagnostic instruction; staff development and inservice training; parent participation; parent education; and health needs. Although comprehensive restructuring was not required in ESEA Title I and EDY, these programs were required to individualize instruction and to provide staff development, parent participation, parent education, and health and auxiliary services.

Requirements Relating to Student Achievement

ECE, ESEA Title I, and EDY all stress, as a major purpose, increased student achievement in basic skills, with primary emphasis on reading, language development, and mathematics. In all three programs provision was to be made for multicultural activities for students and special services for students who were non-English or limited-English speakers.

Procedures, Instrumentation, and Limitations

In order to evaluate fully the objectives of the programs included in this summary report, it is essential to examine both institutional changes and student outcomes. Conclusions based on a review of either institutional change or of student outcomes, alone, could be significantly misleading. The information to be considered provides both a picture of the program in operation and a picture of the program's results. By necessity, this report is based on a series of measurements or examinations of small facets of the total program. The evaluation of the whole program is, therefore, a collection of several separate evaluations of parts, which then fit together to provide an outline of the whole.

Institutional Change Data

Several sources were used to produce data for the evaluation of programs receiving ECE, ESEA Title I, or EDY funds. While part of the data was used to determine participant eligibility, another part was for school, district, and state-level planning and evaluation. A complete discussion of each of the data sources, their use, and their limitations is presented in the complete evaluation report. The data presented in the findings regarding institutional change came from the plan ratings, which were ratings given to ECE schools' plans submitted for review by the Department of Education; the monitor and review (MAR) process during which Department staff visiting ECE schools rated certain items observed at the schools; and the self-reports, which were product evaluation reports and in-depth studies in which ECE, ESEA Title I, and EDY schools described and evaluated their programs.

Production of the school-level plans was, in and of itself, evidence of planning and design within the local school and was a local self-report of the completed needs assessment process. The rating of the plans provided a measure of the ways in which systematic planning could be translated to paper. This rating was not, however, necessarily an indication of the schools' abilities to implement such planning.

School visitation data secured from the MAR process provided information on a given school at a given time. Such data did not, however, provide information about change during the course of a year, and the data may have been affected by the presence of the observer. Questions of inter-rater reliability were also frequently raised in respect to such on-site quality judgments. Training sessions and field testing of the instrument were carried out in 1974-75, but no statistical estimates of the reliability of the instrument's application were made.

The self-report information varied from judgments of the program's quality and effectiveness by the people involved to counts of participants and monies. Self-reporting of enumeration data was generally quite accurate but had limited usefulness beyond suggesting the scope of the program. There was no monitoring or auditing of the self-reports on accomplishment of objectives and activities. Such information, even with the assumption of complete good faith, was subject to local interpretation. Since there was school-level knowledge of the use of these self-reports for the evaluation of accomplishment which affected the ECE expansion formula, the data may be biased. The in-depth study data, however, which were also self-report information, were not used for the expansion-formula. One limitation of these data may be in their local recommendations. These were generated by people closely involved with the program who had full knowledge of the situation, but who may not have been able to be objective about it.

It can be seen from the foregoing that the measurement of institutional change is a very difficult process and subject to many limitations. When a wide variety of instruments and approaches are used, however, and when other measures, such as the student outcome data, are combined with them, they constitute the most useful tool presently available for deriving a collective measurement of institutional change and for providing a comprehensive picture of the program and its total effects.

Student Achievement Data

The data presented in the areas of student achievement came from objective, norm-referenced achievement tests. These tests are relatively insensitive to specific instructional programs—that is, they

measure general objectives quite well but measure specific objectives poorly or only by inference. The instructional activities in any given program frequently stressed specific objectives and, hence, may not be adequately measured with norm-referenced tests. In such cases, norm-referenced tests tend to give underestimates of the actual instructional gain made by the students. To compound this problem, a variety of instruments were used to secure data on student achievement. The Department of Education was constrained, however, to use norm-referenced tests, since such tests made comparisons among groups possible.

While test scores have conventionally been expressed in grade equivalents, many technical shortcomings exist in the use of this particular type of derived score. This year the Department is presenting, in addition to the grade equivalents, a standard score which has an arbitrarily defined mean of 50 and a standard deviation of 10. The presentation of standard scores provides an analysis of achievement data that relate the program effects during the year to the program outcomes for that year. In addition to these characteristics, the standard score can be interpreted normatively. For example, if students score 48 on the pretest, the score represents their relative position to a normative group. If those students make a year's progress during the year, their post-test scores would also be 48. Thus, they have maintained their same relative position at post-test time to the normative group. To the extent that the post-test score is greater than the pretest score, the student or group can be considered as having made greater than a year's growth.

The Department has not attempted to sample from the total group of students who were exposed to a given instructional component. The test scores presented represent all the usable scores submitted to the state by participating districts. The number of students whose scores are presented is smaller than the total number of students in the program. This disparity is the result of a variety of factors; among them are student transiency, the use of inappropriate tests, or other factors which would mitigate against the Department's having confidence in the accuracy of the data submitted. Furthermore, only those students for whom both pretest and post-test scores were available are included in the analyses. The data used reflect the scores of students who received regular and substantial services and who were tested with appropriate instruments. Useable test scores were analyzed for 54 percent of the participants in reading, for 14 percent of the participants in language development, and for 51 percent of the participants in mathematics.

A random sample of the data which were classified as irregular and unsuitable for processing was reexamined, and 50 individual schools were contacted in an attempt to determine whether the exclusion of these data could have introduced a bias in the statewide averages. For some irregularities, comparable figures could not be discerned. In the case of irregular first grade test scores, however, it was found that the average post-test scores of schools that did not report pretest scores were not significantly different statistically from the average post-test scores for schools that did report both pre- and post-test data.

The Findings

Program participants included students, parents, school personnel, and other community members who participated in any ECE reform effort or in an ESEA Title I or EDY program. Students within a participating school who were in various special education day classes were not considered program participants. A total of 806,752 students in kindergarten through grade twelve participated in the consolidated programs in 1974-75. (See Figure 1 for the number of student participants by grade level.) Approximately 65 percent of the participants were enrolled in kindergarten through grade three, with 23 percent in grades four through six and 12 percent in grades seven through twelve.

More students received services in the reading component than in any other instructional component. More than 770,000 students were served in reading; 580,000, in language development; and 717,000, in mathematics components.

The schools maintaining programs employed aides, teachers, specialists, and resource personnel. Volunteer help constituted a significant contribution of time spent in programs by adults. Nearly 200,000 hours per week of program assistance were donated by 67,000 adult volunteers. An additional 61,000 students in several grade levels volunteered more than 156,000 hours per week in assisting other students.

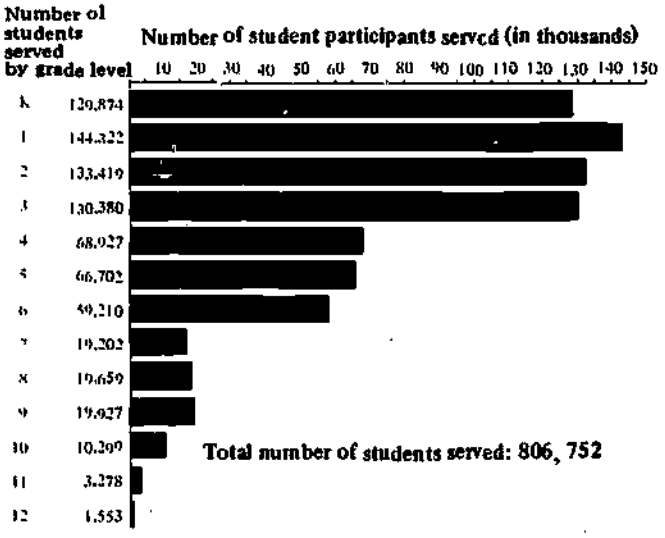


Fig. 1. Number of student participants in ECE, ESEA Title I, and EDY, by grade level, 1974-75

Expenditure Findings

The allocations, expenditures, and carryover funds for each of the three major funding sources under the consolidated application process were reported by August 15, 1975. Although an audit of the reports filed for each funding source was not complete at the time this summary report was written, it was possible to select for evaluation a random sample of reports from ESEA Title I, ECE, and EDY schools. Each district reported a summary of the total amounts expended for all schools within the district receiving the specific funds. (See figures 2, 3, and 4 for the percent of monies expended, by categories of expenditures, in the districts sampled; however, use caution in the interpretation of the data because these figures were based on a sample of the reports returned.)

It should also be kept in mind that several funding sources are frequently combined within a school, so that the patterns may simply reflect the decisions of which source to use to provide specific parts of a total local school program. Furthermore, the funds in all cases must be supplementary, not supplanting.

Institutional Change Findings

The ECE reform effort provided an "umbrella" for institutional change within the kindergarten

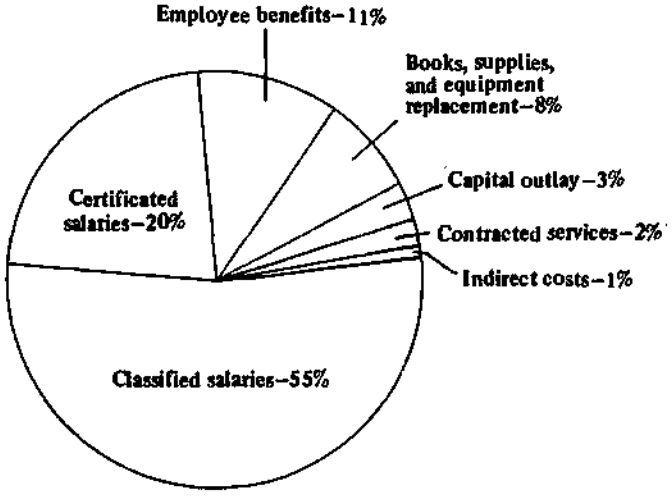


Fig. 2. Budget categories of ECE funds by percent of expenditure, from a random sample of unaudited reports of 22 district summaries, 1974-75

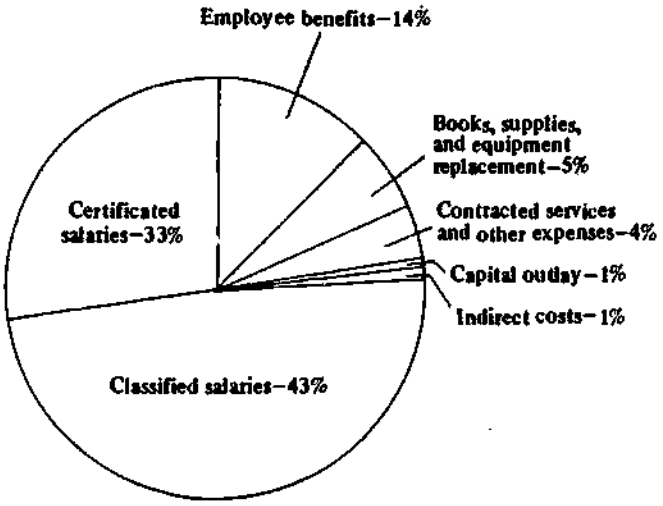


Fig. 3. Budget categories of ESEA Title I funds, by percent of expenditure, from a random sample of unaudited reports of 18 district summaries, 1974-75

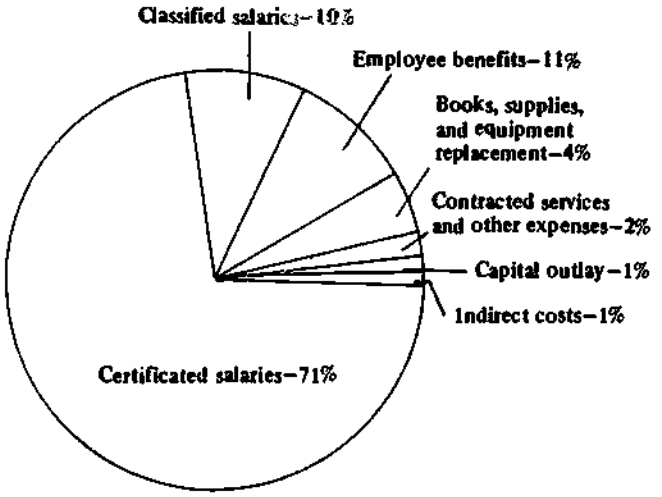


Fig. 4. Budget categories of EDY funds, by percent of expenditure, from a random sample of unaudited reports of one cooperative summary and 14 district summaries, 1974-75

through grade three schools. ESEA Title I and EDY services for kindergarten through grade three students were integrated into the school plan under the comprehensive "umbrella." As a result, the overall findings in this section relate directly to those schools in which ECE was present; however, other funding was present in many cases.

District level planning occurred, and district advisory committees were operational in 1973-74. No additional district level plans were requested or filed in 1974-75.

All schools performed school level planning. The ECE plans were submitted to the Department of Education during the summer of 1974 and were rated. The plans contained a report of the needs assessment process which had been conducted prior to the plan development and its results.

The ways in which needs were identified varied. In one school a full day conference was held. All members of the staff, many of the parents, and some students worked in small groups to discuss what they saw the school doing well, what it was doing poorly, and what it should be doing. In another school, members of the faculty and the principal met in homes with different groups of 20 parents each, holding informal discussions about the school. In a third school, a questionnaire was sent to all faculty, staff, parents, and students, asking them to describe the good and bad things that the school was doing.

From the evidence provided by the plan ratings, it can be concluded that needs assessment of a rather high quality was conducted in approximately 75 percent of the schools. The quality of the analysis of needs was generally good; in the areas of relating the program to the identified needs, schools did quite well.

The development of goals frequently occurred at the same time that needs were identified. At local schools, groups would develop defined and measurable performance objectives in different ways. For example, one school had a series of evening meetings with a group of ten representative parents writing goals or objectives statements. Another school's staff members wrote its objectives; then a large group meeting was held for parents during which the objectives were either approved or modified. In a third situation, a small group of parents and staff members went on a weekend retreat, wrote the entire plan, and brought it back to the other parents and staff members for their modification and approval.

The plan rating data showed that fewer than 20 percent of the schools had difficulty in making clear statements of their goals or desired conditions, while more than 23 percent were judged as excellent.

Evidence of the implementation of school plans and of the effect they had on institutional change may be inferred from the on-site reviews and the data from the self-reports prepared by the schools.

Diversity existed not only in the ways in which the school plans were developed but also in the implementation of the programs. All programs

were to provide an individualized diagnostic, prescriptive approach to instruction. Within this broad outline, the ways in which students were instructed varied from school to school. For example, a mathematics and reading test center was established in one school. Each student was tested there, and the results were given to the classroom teacher. The teacher then established an appropriate two week lesson plan for each student, after which the students went back to the test center for retesting and the cycle was continued. In another school, the teacher read every other day with each student, made notes about the areas in which the student needed help, and then gave a special assignment for the next day. In a third school, a classroom aide, under the direction of the teacher, assessed each student. The teacher reviewed the assessments, decided what each student should do next, and had a volunteer do that work with the student.

In terms of individualized instruction, schools were rated in reading, language development, and mathematics on the quality of their organization, diagnosis, prescription and documentation, and the continuous progress nature of their curriculum. In general, approximately 50 percent of the schools were rated "high" in their ability to perform these functions in reading and mathematics, with fewer than 10 percent below "satisfactory." Although more than 75 percent of the schools rated satisfactory or better in the area of language development, on several items at least 20 percent rated below satisfactory.

Staff Development and Inservice Training

Restructuring of staff development activities occurred not only within schools funded through ECE but also in those funded through ESEA Title I and EDY. For ECE schools, the monitor and review (MAR) ratings were based on the quality of staff development to meet the assessed needs of the teachers, paid aides, volunteers, and administrators and on the involvement of staff in designing the program. Diverse staff development activities which were systematically related to the program occurred at a satisfactory level or above in more than 85 percent of the schools. The ability of the program to meet the assessed needs of volunteers was lower; approximately 70 percent of the schools were satisfactory or above in that respect.

Parent Participation

Schools reported that opportunities for parents to assess program needs as they perceived them were afforded through a variety of methods, including participation in formal surveys, school advisory committees, site visits, and parent-staff conferences.

Each school planned for the use of its parent resources in ways that best met the unique circumstances of the school and the community. In some schools where there were many working parents, participation took the form of assistance outside school hours. Other schools were able to obtain so many volunteers that they did not need as many paid aides as they had originally planned to hire. In ECE schools alone, more than 180,000 parents participated in school programs.

The MAR process judged the quality of parent participation in ECE schools on the basis of (1) the regular meeting and effective representation of the parents and the community by the school advisory committee; (2) the regular involvement of parents in program planning, assistance in classrooms, other supportive assistance, and program evaluation; (3) the existence of an active program to arouse parent interest and enlist support; and (4) the ability of the program to encourage home-school communication in easily understood language. In more than 85 percent of the schools, the quality of parent participation was either "satisfactory," "high," or "exemplary." However, for parent involvement in program evaluation activities, almost 23 percent of the schools were rated less than satisfactory.

Parent Education

Since parent needs varied considerably among ECE schools, there was no one approach to parent education. In some areas, for example, the parent education program concentrated on basic skills, which were identified by the parents as their first concern, while in other schools parents requested theoretical courses in child development.

Expansion of the parent education program in 1974-75 over 1973-74 showed a 55 percent increase in participants as contrasted to a 30 percent increase in participating schools. In the 1,141 ECE schools with parent education programs, 118,347 parents participated.

Health and Auxiliary Services

The major auxiliary services objectives were related to providing pupil personnel and health services in ECE, ESEA Title I, and EDY schools. The MAR data indicated that in more than 90 percent of the ECE schools, the quality of the pupil personnel and health services was "satisfactory," "high," or "exemplary."

Program Evaluation at the Local Level

All school level plans contained evaluation and dissemination provisions which were parallel to the activities proposed. Since schools were required to report to the state on the effectiveness of these activities at the conclusion of the program, the data submitted to the state were considered evidence of the evaluation process at the local level.

Achievement Findings

This section is designed to give the reader an overview of the impact of the various supplemental programs on the achievement of California students who participated in ECE, ESEA Title I, and EDY.

The Reading Component

A total of 770,000 students were served in the reading component of ECE, ESEA Title I, and EDY. Usable standard score achievement data were available for 313,820 students and are displayed in Figure 5. When examining figures expressing standard score results, the reader should keep the following in mind: A standard score of 50 equals the national average. Looking at Figure 5, the reader will note that the pretest scores for kindergartens averaged 44.4. The post-test score was 51.2. This represented 6.8 points more gain than would have been expected in one year of instruction. It also indicated that kindergarten students exceeded the national average in reading achievement on the post-test. It can also be seen that students in grade one approximated the national average in reading achievement on the post-test. Students in grades two and three showed gains, but the post-test was somewhat lower than that for kindergarten and grade one—and, in fact, continued to decrease through grade eight. While the post-test scores showed that students in the upper elementary grades remained below the national average, there was an absolute magnitude of gain evident across all grades for all students measured. This gain was greatest in the lower grades and least in the upper grades.

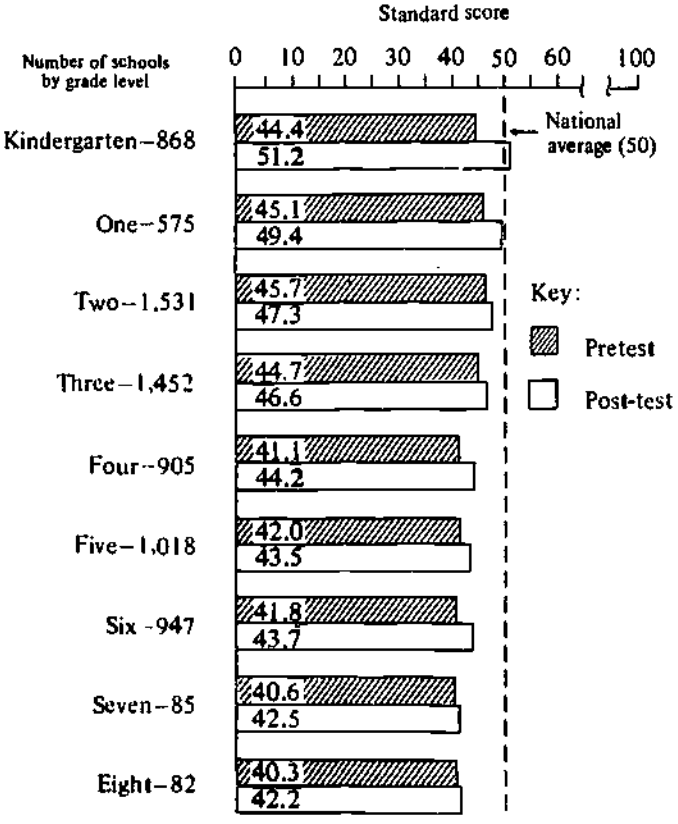


Fig. 5. Average pretest and post-test standard scores in reading achievement, by grade level, for schools that received ECE, ESEA Title I, and EDY funds in 1974-75

Figure 6 shows essentially the same information as that presented in Figure 5, except it is expressed as grade equivalents, and it includes results for secondary schools. Again, growth is evident for all students tested in all grades. The greatest growth was in the primary grades and at the secondary level. The least amount of growth, although it is still substantial, was in the upper elementary grades. The scores reported as grade equivalents for the high school level were based on a small number of students. Therefore, while the growth rate was very substantial in grades eleven and twelve, it must be interpreted with caution.

The Mathematics Component

More than 717,000 students were served in the mathematics component in ECE, ESEA Title I, and EDY. Usable standard score data were available for 276,371 students. Figure 7 shows achievement gains in mathematics. While students in grade one were at the national average on the post-test, students in kindergarten and grade two were slightly below the national average. Progressing through the grades, the post-test levels continue to decline; yet, the post-test scores were higher than the pretest scores for the same students at all grade levels.

When data for the mathematics component are presented as grade equivalent scores (Figure 8), similar growth patterns are evident: greatest growth in early elementary grades and least growth in grades seven through nine. The growth rates in grades ten and twelve should be interpreted with caution due to the small number involved.

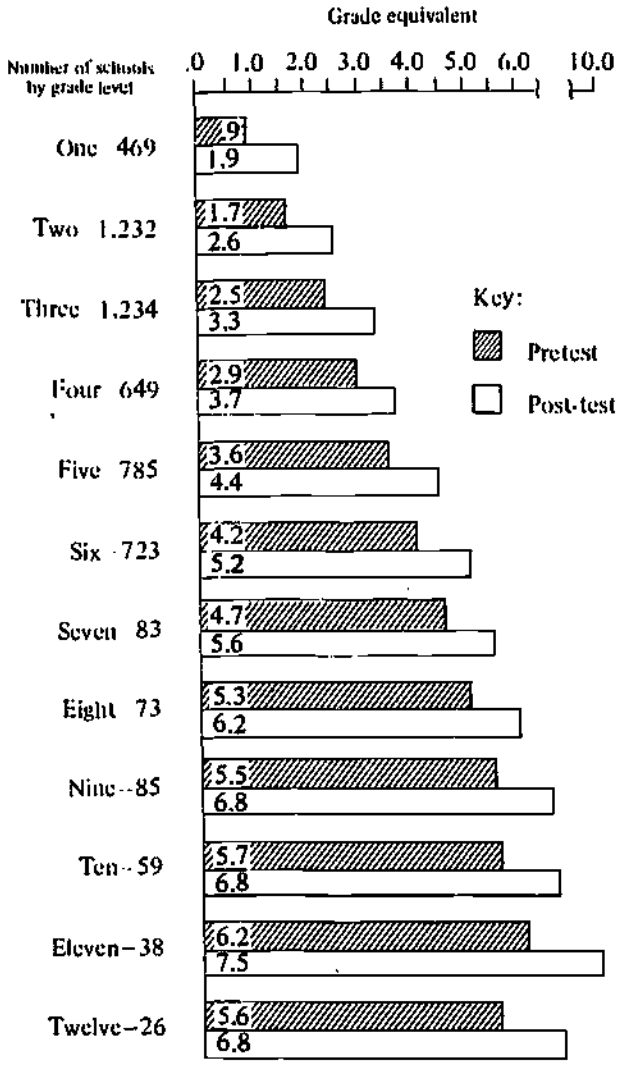


Fig. 6. Average pretest and post-test grade equivalent scores in reading achievement, by grade level, for schools that received ECE, ESEA Title I, and EDY funds for 1974-75

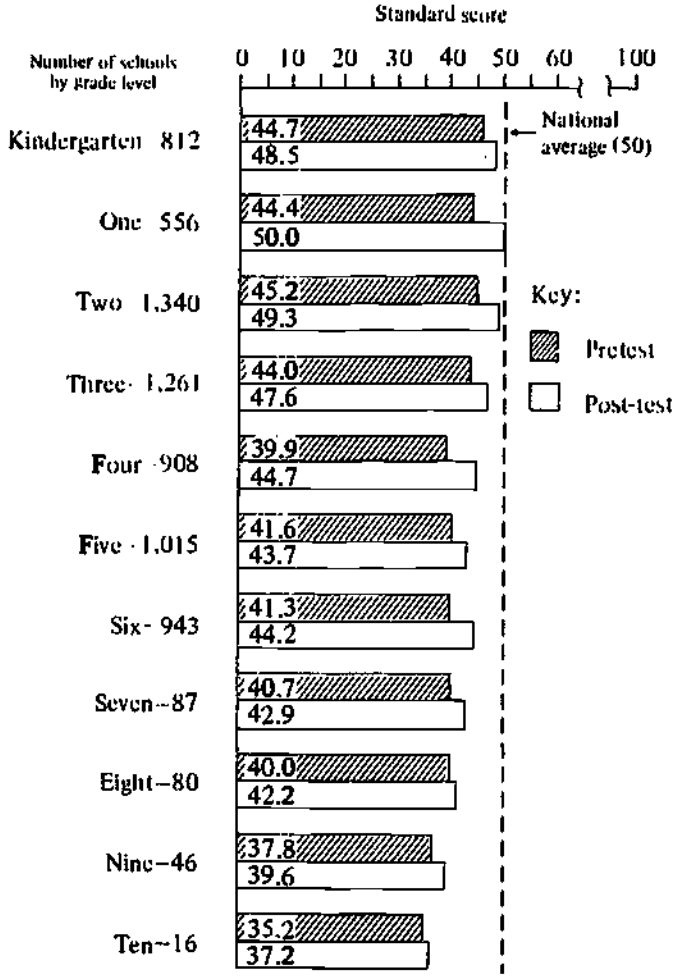


Fig. 7. Average pretest and post-test standard scores in mathematics achievement, by grade level, for schools that received ECE, ESEA Title I, and EDY funds in 1974-75

Findings from Early Childhood Education

Since the ECE reform effort was implemented in a relatively comprehensive manner, it was appropriate to review the outcomes specifically of ECE schools in the areas of reading and mathematics.

Reading achievement data for ECE students in schools having various combinations of funding sources are presented as standard scores in Figure 9. A review of the figure shows that students in all combinations of ECE programs had post-test scores in kindergarten and grade one that exceed the national average (50), while students in grades two and three were closer to the national average on the post-test than they were on the pretest.

A further review of Figure 9 shows that the program combinations of ECE/Miller-Unruh and ECE/Title I yielded the highest post-test scores for students in kindergarten through grade three.

The Department used reading achievement scores from the California assessment program (CAP) as an additional check on state evaluation of programs. All ECE schools were compared with non-ECE schools in terms of four indices: (1) average socioeconomic status; (2) number of grade three students; (3) total percentage minority enrollment; and (4) 1974-75 third grade predicted score on the CAP reading achievement test. The frequency distribution of ECE and non-ECE schools across the four indices is shown in the appendix to the complete evaluation report. A great deal of variation exists among both ECE and

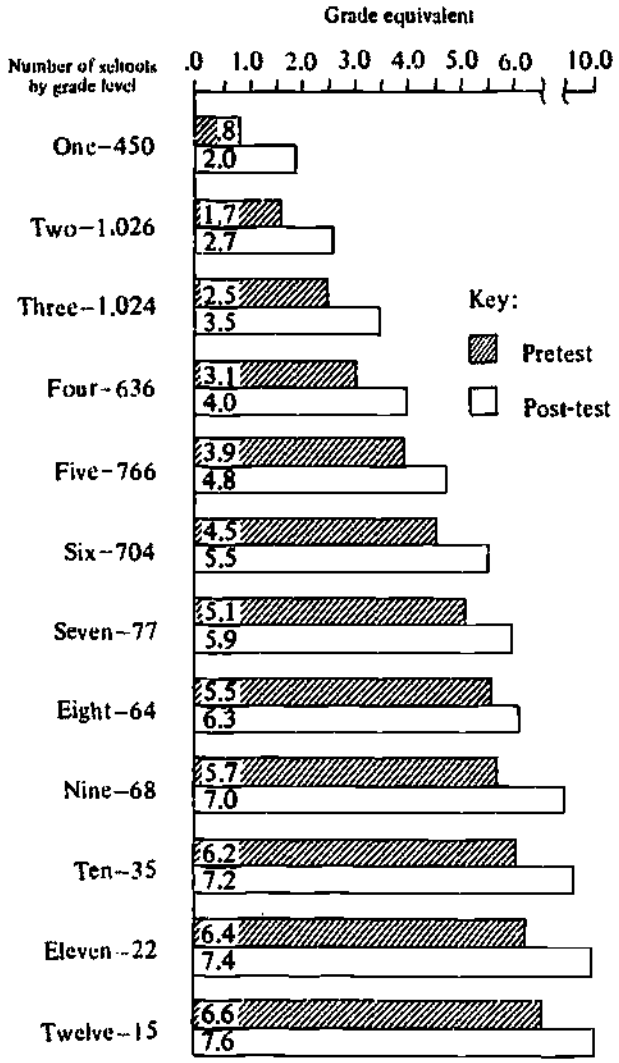


Fig. 8. Average pretest and post-test grade equivalent scores in mathematics achievement, by grade level, for schools that received ECE, ESEA Title I, and EDY funds for 1974-75

non-ECE schools. Yet, it can be seen that compared to non-ECE schools, the ECE schools on the average had indices of lower socioeconomic status, larger school size, and a higher percentage minority enrollment.

Longitudinal profiles of student performance in reading achievement were computed for ECE schools in the program for one year, ECE schools in the program for two years, and a matched group of non-ECE schools. Reading achievement gain scores from CAP, as presented in Table 2, follow the students in the same schools for two years: 1973-74 and 1974-75. The reading achievement scores made by second graders in 1973-74 were subtracted from the scores on an identical reading achievement test taken as third graders in 1974-75. As seen in Table 2, students in both one and two year ECE schools showed statistically significant higher gain scores than students in non-ECE schools.

Since two-year ECE schools showed slightly greater gains than one year ECE schools (15.7 vs. 15.5), this is viewed as a positive result for the ECE program for at least two reasons. First, it puts to rest the contention that ECE would have only a temporary effect that would vanish in the second year of operation. Instead, there appears to be a cumulative effect over years. Secondly, the two-year ECE schools have a somewhat lower index of socioeconomic status than the one year schools, which indicates that their gains would generally have been predicted to be smaller than those of the one-year ECE schools.

Table 2

Reading Achievement Gain Scores for ECE Schools and Matched Group of Non-ECE Schools

Type of school	Third grade scores, 1974-75	Second grade scores, 1973-74	Gain scores*
Two years in ECE (N = 427)	79.2	63.5	15.7†
One year in ECE (N = 658)	81.0	65.5	15.5†
Matched non-ECE schools (N = 3,326)	80.6	65.6	15.0†

*These scores are presented as number correct in 1974-75 less number correct in 1973-74.

† $\alpha = .001$

A comparison of grade equivalent gains in reading and mathematics was made between first year ECE schools in 1973-74 and first year ECE schools in 1974-75. Table 3 shows the comparisons of gains for the respective first year schools. The data presented indicate that during their first year of operation, schools entering ECE in 1974-75 showed significantly greater gains than did schools in their first year of operation in 1973-74. Since it was not possible to match these schools, and the schools reporting in grade equivalent scores in 1974-75 represented less than half the total number of schools reporting, caution should be used in the interpretation.

The data in Table 3 appear to contradict the argument that the first group of schools in ECE were such a select, highly motivated group that the "Hawthorne effect" was responsible for their gains in the first year, and, thus, subsequent years schools' scores would therefore show lower achievement gains.

Standard score achievement data in mathematics indicated that ECE students in kindergarten and grade one exceeded the national average (50) on the post-test, while students in grades two and three were less than one point below the national average (see Figure 10). In all cases, post-test scores were higher than pretest scores.

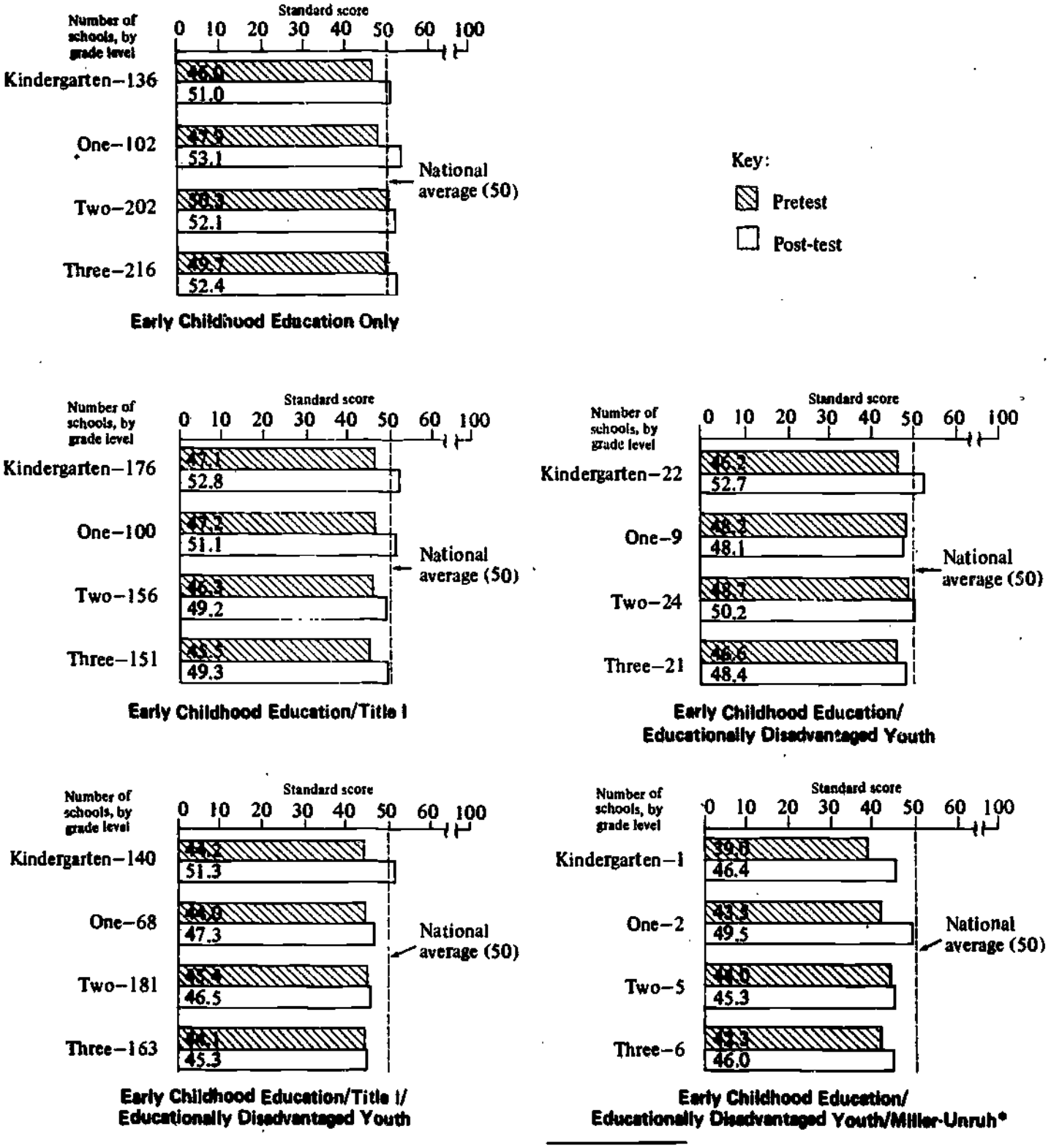
Students in schools having ECE monies (only) or a combination of ECE/Title I monies exceeded the average for all other combinations of ECE funded schools at all grade levels (kindergarten through grade three) in mathematics.

Table 3

Average Increase in Grade Equivalent Scores in Reading and Mathematics Between Pretest and Post-test for ECE Schools in Their First Year of Operation

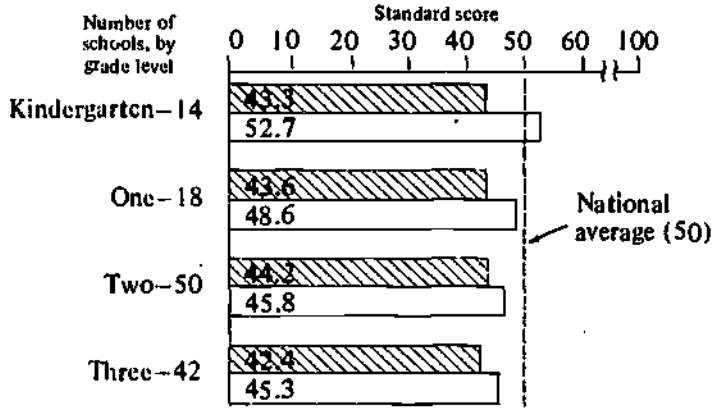
Skill and grade	1973-74 gains for schools entering ECE in 1973-74* N = 814	1974-75 gains for schools entering ECE in 1974-75* N = 491	Level of significance
Reading			
Grade one	.75	.98	.001
Grade two	.83	.95	.001
Grade three	.83	1.04	.001
Mathematics			
Grade one	.84	1.07	.001
Grade two	.91	.94	N/S
Grade three	.99	1.08	.016

*These grade eqnivalent gains reflect absolute magnitnde of change and are not extrapolated to 10 months of instruction.

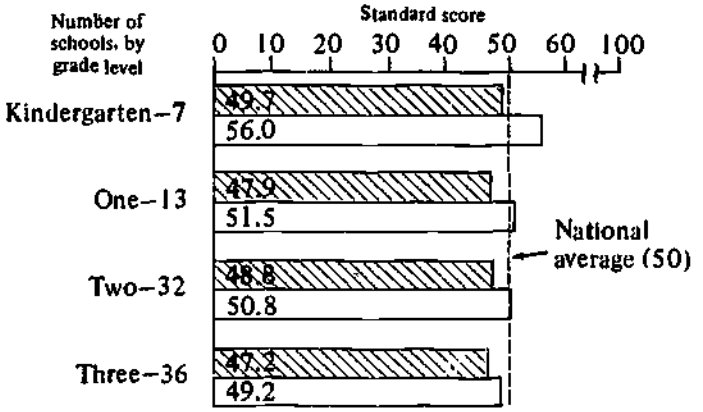


*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

Fig. 9. Weighted average pretest and post-test standard scores in reading achievement, by grade level, for schools participating in early childhood education, 1974-75



Early Childhood Education/Title I/ Educationally Disadvantaged Youth/Miller-Unruh*



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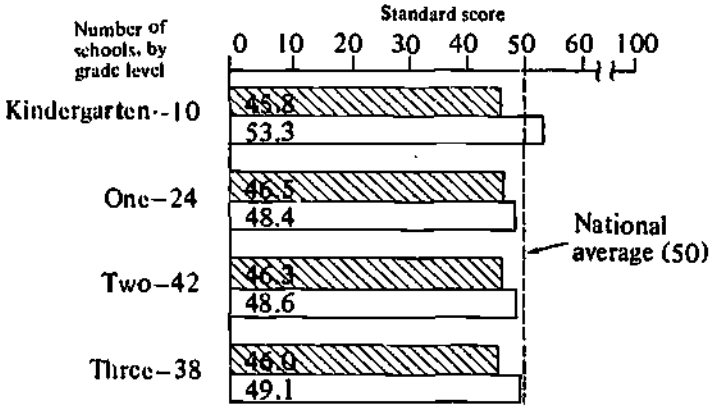

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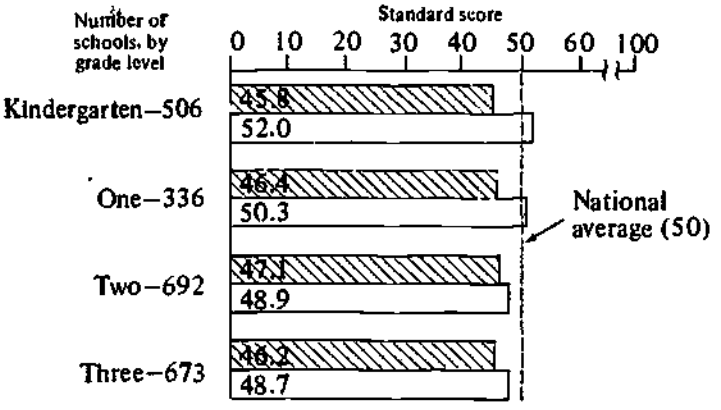
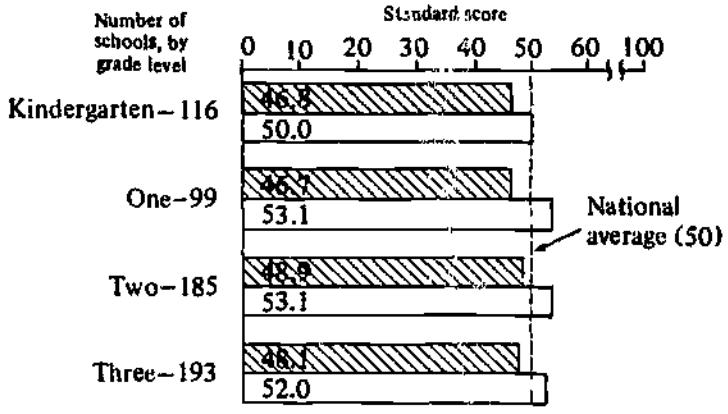


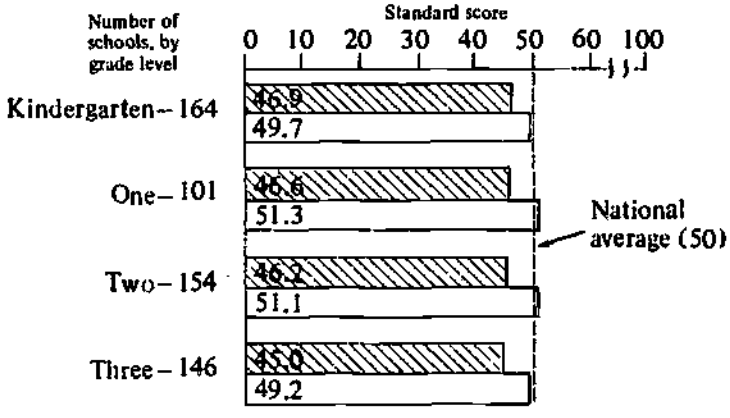
All Early Childhood Education

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

Fig. 9. (continued) Weighted average pretest and post-test standard scores in reading achievement, by grade level, for schools participating in early childhood education, 1974-75



Early Childhood Education Only



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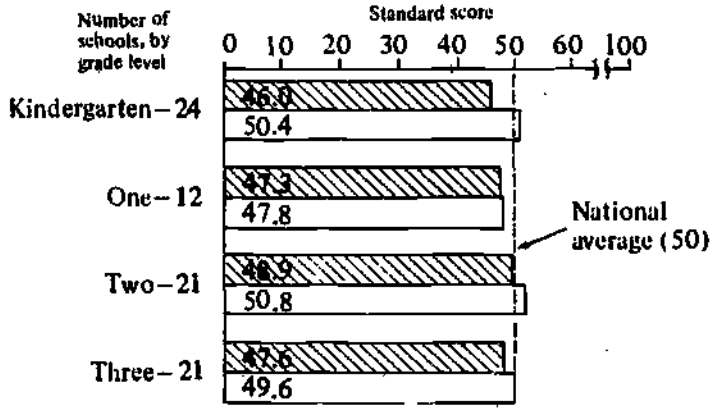
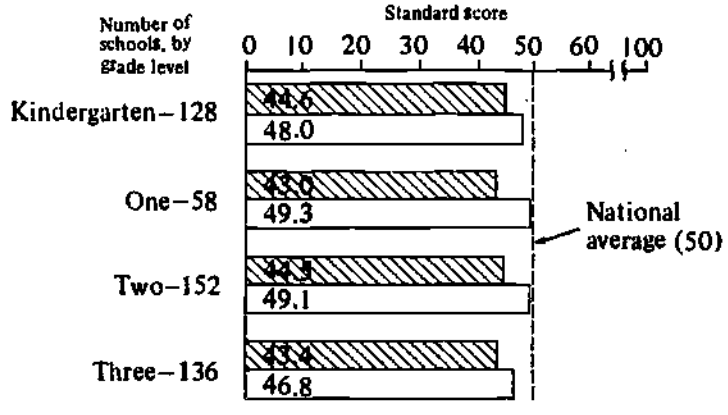


Early Childhood Education/
Educationally Disadvantaged Youth



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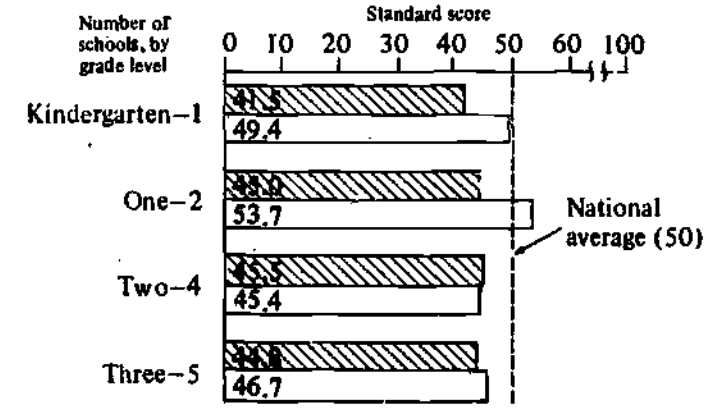
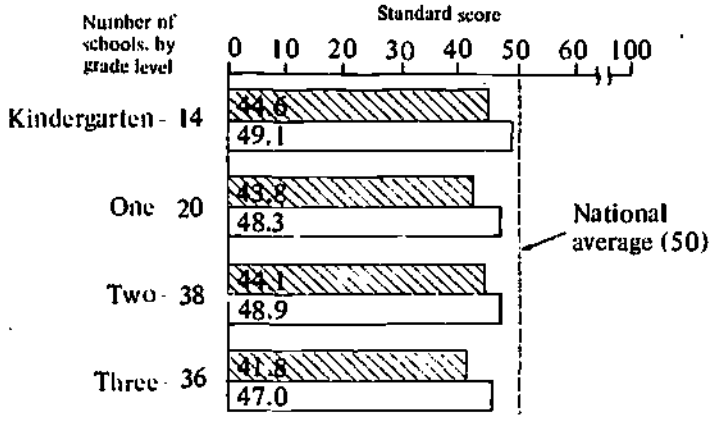


Early Childhood Education/
Educationally Disadvantaged Youth/Miller-Unruh*

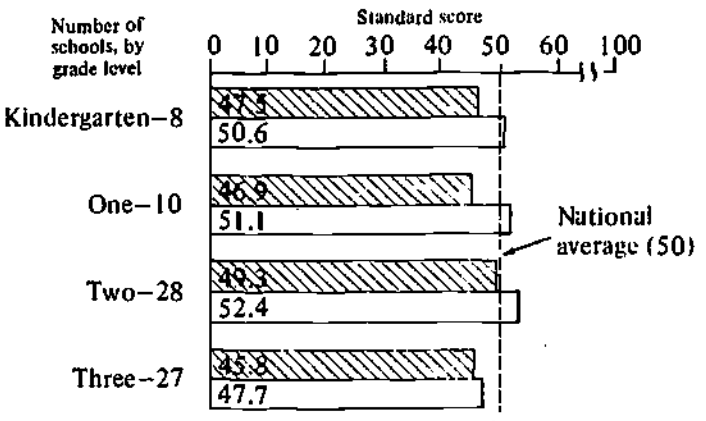
Key:
Pretest
Post-test

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

Fig. 10. Weighted average pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in early childhood education, 1974-75



Early Childhood Education/Title I/ Educationally Disadvantaged Youth/Miller-Unruh*



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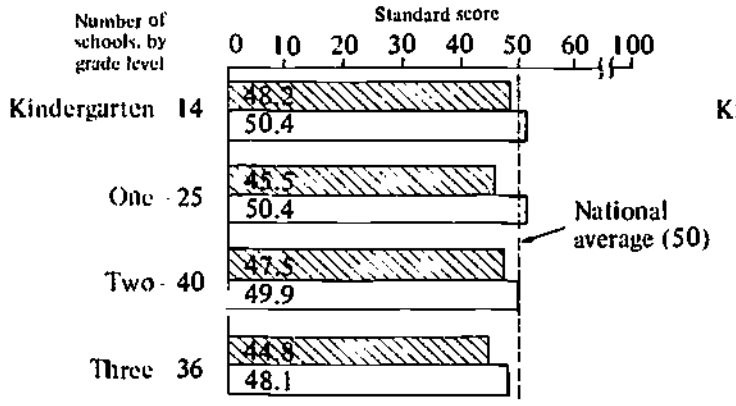
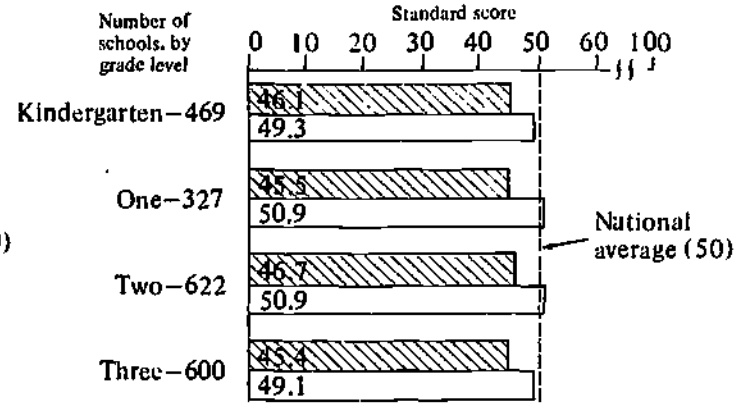


Early Childhood Education/ Title I/Miller-Unruh*



All Early Childhood Education Programs

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

Fig. 10. (continued) Weighted average pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in early childhood education, 1974-75

75-142 DE9366 5.500 1-76